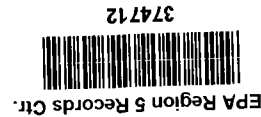


ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

MEMORANDUM



DATE: May 19, 2010

TO: Land Division File

FROM: Charlie King, BOL\DLPC\FOS – Springfield Region

SUBJECT: LPC # 1671200054 – Sangamon County
ILD982606535 Springfield/Nutronics
FOS File

RCRA SAMPLING INSPECTION NARRATIVE

The purpose of this memorandum is to serve as the Resource Conservation and Recovery Act (RCRA) Sampling Inspection Narrative of a RCRA sampling inspection conducted at the subject site on March 17, 2010 from approximately 9:17 a.m. until 4:00 p.m., by a six-person Illinois EPA sampling team, including this author. Sampling team personnel consisted of: Lead Sampler David C. Jansen, Manager; Sampler Richard C. Johnson, Inspector; Bottles/Lab person Paul Eisenbrandt, Geologist; Sampling Assistant Mark Weber, Inspector; Blaine Kinsley, Health and Safety Officer, OER ; and, Team Leader Charlie King (this author), all, except for Mr. Kinsley, of the BOL/FOS – Springfield Region. I served as note taker and photographer during the sampling event.

The sampling event followed the approved and signed Sampling Analysis Plan (SAP) and Health and Safety Plan (HASP), a single document dated March 17, 2010, which is included with this report (reviewed and approved by Blaine Kinsley and signed by each member of the inspection team).

The facility where the sampling event was conducted is the former location of Capitol Engraving and Nutronics, Inc., hereafter referred to in this document as Nutronics. The corporate status of Nutronics is "Revoked", per the attached Corporation file Detail Report. The president of the corporation is Albert J. (Bud) Darran. The former printed circuit board manufacturing facility is located at 1703 Peoria Road, Springfield, Illinois. The building is still owned by Albert J. (Bud) and Sharon Darran (who reside at 22 Bel Aire Drive in Springfield), per the attached Sangamon County property record. Sangamon County considers this building to be located at 1701 Peoria Road. Further information on the facility is in the Project History and Summary, located in the SAP and HASP, Section 1.1.

The purpose of the sampling project was to obtain representative samples of wastes to determine if those wastes were hazardous wastes, and to determine the approximate volume and weight of the wastes sampled, and to assess how the facility is regulated under RCRA. Vats containing acid were observed in the Plating Area Room, and other containers including plastic tanks, 55-

gallon drums, 15-gallon closed drums and smaller containers of various sizes were located in and/or near the Pre-Treatment Facility/Storage Room.

In total, 15 separate samples were taken at the facility. Nine of those samples were liquid samples from vats in the Plating Area Room. A solid sample was taken around an etching machine east of the Plating Room. Another solid sample was taken from a vat in the Pre-Treatment Facility/Storage Room. The final four samples were liquid samples taken from the Pre-Treatment Facility/Storage Room. Three of those samples were from 55-gallon drums and one was from a five-gallon container. Additional details were provided on the attached two pages of Bureau of Land/DLPC/FOS, Chain of Custody sheets.

Information from the Chain of Custody sheets, the lab sampling results and the inspection were incorporated into a Nutronics Sample and Analytical Summary, which is included with this narrative as a part of this report as Table 1. That Summary document includes the sample numbers, sample location and comments, photo numbers, the approximate volume in gallons/weight in lbs., the lab pH, and TCLP (Toxicity Characteristic Leaching Procedure) metal concentration/Hazardous Waste number. For a few samples, analytical results for organics, volatile organic compounds, semi volatiles, flashpoint or other information are included in this column as well. The lab sampling laboratory analyticals are also included with this narrative for each sample, and are titled Laboratory Results.

Vat descriptions are included both in narrative form and in specific Vat Sketch sheets. Illinois EPA Drum Log Sheets are also included herein, and are further described later in this report. Digital Photographs and Site Sketches are included herein as well. Table 2, which is included with this narrative as part of this report, shows Approximate Gallons or Pounds of Wastes in Vats and Containers Sampled. Table 3, which is also included with this narrative as part of this report, shows Approximate Gallons or Pounds in Each Un-sampled Container of 5 Gallons or Greater Capacity. Also included are an NFPA 704 Warning Placard Requirements information sheet and other supporting documents.

On March 11, 2010, and on March 16, 2010, the day prior to the sampling event, internal meetings were held where the SAP and HASP document was discussed. In particular, the role and responsibilities of each team member, sampling preparation, types of samples to be taken, Chain of Custody, Vat Logs, various specific preparations, expected wastes to be encountered, inventory of sampling gear, levels of Personal Protection Equipment (PPE), air monitoring meters, planned photographs and notes to be taken, and other details were discussed and studied. A refresher practice session with Self Contained Breathing Apparatus was conducted, and overseen by Mr. Kinsley. Preparations were made that were designed to make operations on the day of the sampling event run as smooth and safe as possible.

Upon arrival at the facility on the day of the sampling event, the weather was partly cloudy with an air temperature of approximately 44° F. Winds were northerly at approximately five (5) mph. Surface soil conditions were damp.

Upon arrival at the facility on the day of the inspection, I commenced taking a few photographs outside of the facility. While I was doing that, Mr. Darran arrived by prior arrangement with Mr.

Jansen at approximately 9:30 a.m., met with Mr. Jansen and unlocked the back door of the building. Mr. Darran left the site shortly after he showed Mr. Kinsley and Mr. Jansen the building interior. There was no electricity or running water at the facility. Therefore, flashlights were used during sampling in some areas. The double doors at the west end of the Plating Room could not be opened. Further efforts to open them were abandoned in the event that the doors could not be locked or re-sealed after opening. Sampling from the Storage Room was conducted with the aid of natural light, as a garage door was opened at the west end of that room. Because of the darkness in most of the facility, and the wet floors from a leaking roof, extra care had to be taken to ensure safety.

At approximately 9:45 a.m., Messrs. Jansen and Kinsley, put on Level B PPE in preparation of taking initial meter readings just outside, and inside the facility in several areas. A ppb-RAE and a Solaris 4 gas analyzer were used. A Toxic Vapor Analyzer (TVA) was also used by Mr. Kinsley. Readings indicated we could sample in Level C PPE with splash protection, which consists of an air-purifying respirator with correct air filter cartridges, Saranex suit, green neoprene boots, Nitrile surgical gloves, latex protective booties, shoulder length thick neoprene gloves for the samplers, duct tape at the wrists and ankles, hard hat and a face shield.

Mr. Eisenbrandt immediately commenced setting up tables for sampling operations upon arrival. He had already prepared the sample bottles, and brought a digital label maker. Mr. Weber assisted with the setup of the tables with Mr. Eisenbrandt, and helped the samplers prepare for the sampling.

The Sampling Analysis Plan and Health and Safety Plan are included with this narrative and are part of this report. It was reviewed and approved by Blaine Kinsley. It has been referenced throughout this narrative and served as the guide to follow during the sampling event.

The following information pertains to specific sampling procedures and information. The name of the site, sample number, time, field pH and the sampled bottles are presented in the Digital Photographs included with this report, and therefore will not be repeated here. The Site Sketch contains similar information.

The Plating Area Room, which is the furthest room to the southwest of the facility, is where the three vats that contained suspected acids were located. Vats in this room were sampled first. Vat # 1 measured approximately 39 ½ inches wide, 77" long and 40" deep. All three vats appeared to be constructed of a heavy plastic material. Vat # 1 was divided into five compartments, each separated by a plastic wall. The compartments on each end of the vat measured approximately 19" wide, while the middle three compartments measured approximately 12" wide. The wastes in each vat compartment were tested with pH paper and then were sampled from the west end to the east end. Field pH tests were conducted to ensure that any acidic or basic samples collected were not stored in the same sample cooler, and to ensure that sampling and laboratory personnel were aware of the sample pH while handling. Each compartment in Vat # 1 was sampled and the samples were numbered X201, X202, X203, X204 and X205. The first three, and fifth compartments contained approximately 27" deep of blue/green fluid. The fourth compartment, where sample X204 was taken, contained blue fluid

that was approximately 25" deep. Field pH tests indicated all the liquids in Vat # 1 had a pH of approximately 1.

Vat # 2 measured approximately 40" wide, 109" long and was 40" deep. It was divided into six compartments, each separated by a wall. Samples were again taken west to east, and field pH tests were taken with pH paper. Sample X206 was taken from the first compartment which measured 12" wide. It contained a green fluid that was 17 inches deep. The second and third compartments were empty and no samples were taken. They were approximately 10" wide and 20" wide respectively. The last three compartments each measured approximately 19" wide. Sample # X207 was taken from the fourth compartment which contained approximately 26" of green liquid. Sample # X208 was taken from the fifth compartment which also contained approximately 26" of a green liquid. The sixth compartment contained less than an inch of a light brown liquid and was not sampled. Field pH tests indicated all the liquids sampled had a pH of approximately 1.

Vat # 3 measured approximately 40" wide, 70" long and 44" deep. It had no compartments and had approximately 25" of clear liquid in it. However, part of the ceiling tiles had fallen into this vat and some crusty substance was on the internal walls. Sample # X209 was taken from this vat. The ceiling tiles were apparently damaged from leaking water. Field pH testing of the liquid waste in this vat showed a pH of approximately 1.

Solid samples were taken next from the etching machine area, which is just east of the Plating Area and Storage rooms, and from a dry vat inside of the Storage room. These are sample #s X210 and X211, respectively. In both cases, a blue green crusty residue suspected to be copper contaminated, was sampled.

Three 55-gallon drums and a five-gallon container were also sampled in the Storage Room, located immediately north of the Plating Area room. As noted, this is the room where a west garage door was opened to let in some natural light. This room was cluttered with containers of liquid, most of which were five-gallon capacity and smaller.

Following the sampling, five-gallon capacity and greater containers were catalogued and identified in both drum log sheets included with this report and in Table 3, previously addressed.

The description of each sample is included on the Digital Photograph pages and in Table 1, the Nutronics Sample and Analytical Summary, previously addressed. As noted in the comments following sample descriptions in Table 1, the total weight of the wastes in sampled and un-sampled containers of 5-gallon capacity and larger equals approximately 11,414 lbs. Breakdowns are presented in Table #s 1, 2 and 3.

During the inspection, 52 photographs were taken with digital cameras. Forty-six (46) of those photographs were taken by this inspector. Photograph #s 047 – 052 were taken by Paul Eisenbrandt. The photographs depict observations at the site during the sampling event. From the photographs, four sketches of the site were developed by this inspector. Sketch # 1 shows an overview of the facility, which was originally sketched in 1992, as located in Illinois EPA files. Sketch # 2 shows Vat #1. Sketch # 3 shows Vat # 2 and Sketch # 4 shows Vat # 3. Photographs

are identified by real numbers on the Site Sketches and only appear once throughout the sketches, i.e., 1, 2, etc. Those numbers were placed on the sketches by this inspector. The digital camera provides a three-digit number for each photograph, i.e., 001, 002, etc.. This is how the photographs are identified in this narrative and on the Digital Photograph sheets. Copies of the Site Sketches and the Digital Photographs are included with this report.

The Digital Photographs are described as follows:

Photo # 001 shows the east side of the Nutronics building facing Peoria Road. The sign above the door on the side of the building is shown close-up in photo # 002.

Photo # 002 shows a sign for the Nutronics business on the east side of the building.

Photo # 003 shows the south side of the Nutronics building facing Ridgely Ave. The hazardous materials warning placard on the building is shown enlarged in photo # 004.

Photo # 004 shows the hazardous materials warning placard on the south side of the building.

Photo # 005 shows the back, or west side of the Nutronics building facing N. 9th Street, and several residences. The Chemical Storage Room is located behind the garage door, and the Plating Room is located behind the double doors to the south of the garage door.

Photo # 006 shows another hazardous materials warning placard similar to the one shown in photo # 002. This placard was located on a door on the west side of the building. This is the door unlocked by Mr. Darran for site entry.

Photo # 007 shows an overview of the Plating Room, as seen from the east interior door. Vat # 1 is at the end of the right superimposed red arrow. Vat # 2 is at the end of the left superimposed red arrow. Samples X201, X202, X203, X204, X205, X206, X207, X208, & X209 were collected in the Plating Room.

Photo # 008 shows an overview of the Plating Room, as seen from near the west exterior doors. Vat # 1 is at the end of the right red arrow. Vat # 2 is at the end of the left red arrow. Vat # 3 is at the end of the middle red arrow.

Photo # 009 shows Vat # 1 in the Plating Room had five compartments, each containing various levels of blue/green liquid waste, of low pH.

Photo # 010 shows Vat # 2 in the Plating Room had six compartments that were either empty or contained various levels of blue/green liquid waste, of low pH. After sampling was completed, the green plastic floor grate leaning on the side of the vat was placed over the top of Vat # 2.

Photo # 011 shows Vat # 3 that contained a clear brown liquid waste of low pH. Note that some parts of ceiling tiles are on top of the vat toward the east wall, and are on the floor at the lower right of the photo.

Photo # 012 shows the ceiling above Vat # 3. Some of the ceiling tiles had fallen onto the floor and into Vat # 3.

Photo # 013 shows Sample # X201 that was taken from the first of five compartments (west to east, or right to left) of Vat # 1. It was taken at 11:34 a.m. and had a field pH (taken with pH paper) of 1. The tape label at the end of the red arrow read "Sulfuric Acid Dip."

Photo # 014 shows Sample # X202 that was taken from the second of five compartments of Vat # 1. It was taken at 11:41 a.m. and had a field pH of 1. The field pH of the liquid in each compartment was written with a yellow paint stick on the side of each compartment.

Photo # 015 shows Sample # X203 that was taken from the third of five compartments of Vat # 1. It was taken at 11:47 a.m. and had a field pH of 1. The tape label at the end of the red arrow read "H₂O Water."

Photo # 016 shows Sample # X204 that was taken from the fourth of five compartments of Vat # 1. It was taken at 11:54 a.m. and had a field pH of 1. The tape label at the end of the red arrow read "Microetch ME515 Sulfuric Acid."

Photo # 017 shows Sample # X205 that was taken from the fifth of five compartments of Vat # 1. It was taken at 12:02 p.m., and had a field pH of 1. The tape label at the end of the left red arrow read "Cleanser Posiclean." The tape label at the end of the right red arrow read "H₂O Water."

Photo # 018 shows an overview of Vat # 1 showing blue/green liquid waste. Note the used pH paper test strips on the edge of the vat.

Photo # 019 shows Sample # X206 that was taken from the first of six compartments (west to east, or right to left) of Vat # 2. It was taken at 12:11 p.m. and had a field pH of 1. The tape label at the end of the red arrow read "H₂O Water."

Photo # 020 shows Sample X207 that was taken from the fourth compartment of Vat # 2. It was taken at 12:19 p.m. and had a field pH of 1. Compartments # 2 and 3 of Vat # 2 were empty. The tape label at the end of the red arrow read "H₂O Water."

Photo # 021 shows Sample # X208 that was taken from the fifth compartment of Vat # 2. It was taken at 12:26 p.m. and had a field pH of 1. This photograph was a bit blurry, so it was re-taken and is shown again in photograph # 022.

Photo # 022 shows the subject of photo # 021 was re-taken and shown more clearly in this photo.

Photo # 023 shows this tape label was on the fifth compartment of Vat # 2. Although blurry, it reads, "Fluoboric Acid Dip." Sample # "X208" was written on this label.

Photo # 024 shows an overview of the first three compartments (1-3), west to east, or right to left, in Vat # 2. The second and third compartments were empty.

Photo # 025 shows an overview of the last three compartments (4, 5 and 6) of Vat # 2. The sixth compartment had only about an inch of liquid waste and was not sampled.

Photo # 026 shows the east end of Vat # 2 and the north side of Vat # 3.

Photo # 027 shows the west edge of Vat # 1.

Photo # 028 shows Sample # X209 of a clear brown liquid that was taken from Vat # 3 at 12:35 p.m. It had a field pH of 1.

Photo # 029 shows Vat # 3 had only one compartment with a clear brown liquid. It had blue/green and white to brown crusty residue on the internal sidewalls and on the four bars crossing the top. Some of the fluid in the vat became turbid after sampling. It also had some parts of ceiling tiles in it.

Photo # 030 shows the copper etching machine, and parts of the floor, covered in blue/green crusty residue. Sample X210 was taken from the plastic box at the end of the bottom red arrow. The top red arrow points to a wire shelf that the plastic box was placed on to get it into a better position to sample.

Photo # 031 shows Sample # X210 of the blue/green crusty residue in the plastic box. The sample was taken at 1:14 p.m.

Photo # 032 shows water damaged ceiling tiles above a pipe with a blue/green crusty residue, located near the copper etching machine shown in Photo # 030.

Photo # 033 shows an overview of the Chemical Storage Room, separated from the Plating Room by the south wall at left. The photo was taken from the east interior doorway to this room. Samples X211, X212, X213, X214, and X215 were collected in the Chemical Storage Room.

Photo # 034 shows an overview of the Chemical Storage Room, as shown from near the garage door.

Photo # 035 shows wastes in small containers on a table in the Chemical Storage Room. These small containers were not sampled or labeled.

Photo # 036 shows numerous five-gallon and larger containers of wastes in the Chemical Storage Room. At the end of the red arrow is Vat # 4, which contains blue/green, white, and brown crusty residues that were sampled (X211).

Photo # 037 shows the blue/green, and white crusty residue inside Vat # 4 shown in Photo # 036. A brown crusty residue was underneath the blue/ green residue at the bottom of the vat. Sample X211 was taken of these residues.

Photo # 038 shows Sample # X211 is of the crusty residues in Vat # 4 shown in photograph # 037. The sample was taken at 1:24 p.m.

Photo # 039 shows Sample # X212 is on top of the 55-gallon blue plastic drum labeled “Tin-Lead Waste!” This brown liquid sample was taken at 2:05 p.m. and had a field pH of 3. This photo was blurred, so it was taken again, shown below as photo # 040.

Photo # 040 shows another photo of sample # X212.

Photo # 041 shows Sample # X213 on top of the 55-gallon black plastic drum labeled “Corrosive”, with the sample number and sample bottles on the drum. This sample had a very vivid dark blue color, and was taken at 2:23 p.m. The blue color masked the field pH results on the pH test strip.

Photo # 042 shows another photo of Sample # X213. The sample was taken at 2:23 p.m.

Photo # 043 shows Sample # X214 on top of this black plastic 55-gallon drum. The light brown liquid sample was taken at 2:44 p.m. and had a field pH of 3.

Photo # 044 shows Sample # X215 was of blue liquid taken from this five gallon plastic container labeled “Flammable”, and “Aqua Flo® Activated Infrared Fusing Fluid”. The sample was taken at 2:56 p.m. and had a field pH of 0.

Photo # 045 shows bags marked # 36 and 37 on the floor east of the copper etching machine. Clear bag # 36 contained a green salt, and bag # 37 was labeled “NICKEL SULFATE”.

Photo # 046 shows this plastic floor grate was placed on top of Vat # 1 before leaving the building. A similar floor grate was also placed on top of Vat # 2.

Photo # 047 shows sampling team members, left to right, David Jansen, Mark Weber, and Blaine Kinsley, in Level C protection.

Photo # 048 shows the interior of Chemical Storage Room as seen from outside the garage door. Sample X211 was collected from Vat # 4 at the end of the left red arrow. The white plastic tanks at the ends of the 3 red arrows were part of Nutronics’ wastewater pre-treatment system.

Photo # 049 shows the interior of the Chemical Storage Room as seen from outside the garage door. The red arrows point to plastic 55 gallon drums that were sampled. From right to left, samples X212, X213, and X214 were collected from these drums.

Photo # 050 shows sample coolers, and an orange plastic bag containing used gloves, Saranex suits, tape, etc.

Photo # 051 shows waste samples packed in sealed bags inside coolers.

Photo # 052 shows waste samples packed in sealed bags inside coolers.

Since the facility has holes in the roof and possibly elsewhere to the outside environment, the building will continue to deteriorate, and parts of the ceiling will continue to drop. Because of

the low field pH results, two of the open vats of acid were covered with plastic grates found on-site, following the sampling. The doors are always kept locked when not in use, per Mr. Darran. Before leaving the facility, the door unlocked by Mr. Darran was locked and the overhead garage door was sealed from the inside.

As shown in the Laboratory Results and Table 1, hazardous wastes at the facility, based on TCLP metal concentrations that exceed regulatory levels, are cadmium (D006), lead (D008), chromium (D007) and selenium (D010). Twelve (12) of the 15 samples were hazardous for corrosivity due to a low pH, with four of the samples showing a pH of 0, and eight more samples having a pH lower than 1. One sample, X215, is a characteristically ignitable hazardous waste, because of a flashpoint of 71° F., which is substantially lower than the hazardous threshold of 140° F., and below.

As shown by the March 17, 2010 Sampling inspection and subsequently the Laboratory Results, hazardous waste has been stored on site in containers and tanks since the facility ceased operation sometime in 2007. Per 35 I.A.C. 721.104(c), hazardous waste generated in a product or raw material tank is subject to RCRA regulation if the hazardous waste remains in the tank more than 90 days after the tank ceases to be operated for manufacturing or for storage of product or raw materials. The wastes on site also appear to have been abandoned, as described in 35 I.A.C. 721.102(a) and (b). This determination results in apparent violations of the Illinois Environmental Protection Act and of the regulations, Title 35, Illinois Administrative Code, Subtitle G. The statutes and regulations that were violated are listed below.

1. 21(e) of the Illinois Environmental Protection Act (the Act), no person shall dispose, treat, store or abandon any waste, or transport any waste into this State for disposal, treatment, storage or abandonment, except at a site or facility which meets the requirements of this Act and of regulations and standards thereunder.
2. 21(f)(1) of the Act, no person shall conduct any hazardous waste-storage, hazardous waste-treatment, or hazardous waste-disposal operation without a RCRA permit for the site issued by the Agency.
3. 21(f)(2) of the Act, no person shall conduct any hazardous waste-storage, hazardous waste-treatment, or hazardous waste-disposal operation in violation of any regulations or standards adopted by the Illinois Pollution Control Board under the Act.
4. 703.121(a) of 35 Ill. Adm. Code, no person shall conduct any hazardous waste storage, hazardous waste treatment or hazardous waste disposal operation without a RCRA permit for the HWM (hazardous waste management) facility.
5. 703.121(b), owners and operators of HWM units shall have permits during the active life (including the closure period) of the unit.
6. 703.150(a)(2), the owner or operator of an existing HWM facility that renders the facility subject to the requirement to have a RCRA permit must submit Part A of the permit application

to the Agency no later than thirty days after the date the owner or operator first becomes subject to the standards in 35 Ill. Adm. Code 725 or 726.

7. 725.113(a), before an owner or operator treats, stores, or disposes any hazardous waste, the owner or operator shall obtain a detailed chemical and physical analysis of a representative sample of the waste.

8. 725.113(b), the owner or operator shall develop and follow a written waste analysis plan that describes the procedures that the owner or operator will carry out to comply with subsection (a) of this section.

9. 725.114(c), a sign with the legend "Danger—Unauthorized Personnel Keep Out," must be posted at each entrance to the active portion of a facility. The sign must be legible from a distance of at least 25 feet.

10. 725.115(a), the owner or operator shall inspect the facility for malfunctions and deterioration, operator errors and discharges that may be causing or lead a release of hazardous waste constituents, or a threat to human life.

11. 725.115(b), the owner or operator shall develop and follow a written schedule for inspecting all monitoring equipment, safety and emergency equipment, security devices, and operating and structural equipment that are important to preventing, detecting, or responding to environmental or human health hazards.

12. 725.116(a), the owner or operator must ensure that a training program for facility personnel teaches them to perform their duties in a way to comply with the requirements of Part 725.

13. 725.116(d), the owner or operator must maintain job and training documents and records at the facility.

14. 725.131, facilities are to be maintained and operated to minimize the possibility of sudden or non-sudden released of hazardous waste or hazardous waste constituents.

15. 725.132, all facilities are to be equipped with communication or alarm systems, fire extinguishers and fire control equipment, spill control equipment, and water.

16. 725.137, the owner or operator must attempt to make arrangements with local emergency response organizations (hospital, and police and fire departments).

17. 725.151(a) of 35 Ill. Adm. Code, each owner or operator must have a contingency plan for the facility.

18. 725.155, at all times there must be at least one employee either on the facility premises or on call with the responsibility for coordinating all emergency operations and activities.

19. 725.173, the owner or operator shall keep a written operating record at the facility concerning the stored hazardous waste.
20. 725.175, the owner or operator shall prepare and submit a single copy of an annual report by March 1 of each year.
21. 725.212(a), the owner or operator of a hazardous waste facility shall have a written closure plan.
22. 725.242(a), the owner or operator shall have a detailed written estimate of the cost of closing the hazardous waste facility.
23. 725.243(a), the owner or operator shall establish financial assurance for the closure of the facility.
24. 725.274, in pertinent part, the owner or operator shall inspect the areas where hazardous waste containers are stored weekly looking for leaks and for deterioration caused by corrosion or other factors.
25. 725.292(a) and (b), pursuant to 35 Ill. Adm. Code 725.292(a), an owner or operator of a new tank system or component must ensure that the foundation, structural support, seams, connections, and pressure controls (if applicable) are adequately designed and that the tank system has sufficient structural strength, compatibility with the wastes to be stored or treated, and corrosion protection so that it will not collapse, rupture, or fail. The owner or operator must obtain a written assessment reviewed and certified by an independent, qualified, registered professional engineer in accordance with 35 Ill. Adm. Code 702.126(d), attesting that the system has sufficient structural integrity and is acceptable for the storing and treating of hazardous waste. This assessment must include, at a minimum, the following information:
 - 1) Design standards according to which the tanks and ancillary equipment is or will be constructed.
 - 2) Hazardous characteristics of the wastes to be handled.
 - 3) For new tank systems or components in which the external shell of a metal tank or any external metal component of the tank system is or will be in contact with the soil or with water, a determination by a corrosion expert of the following:
 - A) Factors affecting the potential for corrosion, including but not limited to the following:
 - i) Soil moisture content;
 - ii) Soil pH;

- iii) Soil sulfides level;
 - iv) Soil resistivity;
 - v) Structure to soil potential;
 - vi) Influence of nearby underground metal structures (e.g., piping);
 - vii) Stray electric current;
 - viii) Existing corrosion-protection measures (e.g., coating, cathodic protection, etc.); and
- B) The type and degree of external corrosion protection that are needed to ensure the integrity of the tank system during the use of the tank system or component, consisting of one or more of the following:
- i) Corrosion-resistant materials of construction such as special alloys, or fiberglass-reinforced plastic;
 - ii) Corrosion-resistant coating (such as epoxy, fiberglass, etc.) with cathodic protection (e.g., impressed current or sacrificial anodes); and
 - iii) Electrical isolation devices such as insulating joints and flanges, etc.
- 4) For underground tank system components that are likely to be affected by vehicular traffic, a determination of design or operational measures that will protect the tank system against potential damage; and
- 5) Design considerations to ensure the following:
- A) Tank foundations will maintain the load of a full tank;
 - B) Tank systems will be anchored to prevent flotation or dislodgement where the tank system is placed in a saturated zone, or is located within a seismic fault zone; and
 - C) Tank systems will withstand the effects of frost heave.
- b) The owner and operator of a new tank system must ensure that proper handling procedures are adhered to in order to prevent damage to the system during installation. Prior to covering, enclosing or placing a new tank system or component in use, an independent,

qualified installation inspector or an independent, qualified, registered professional engineer, either of whom is trained and experienced in the proper installation of tank systems or components, must inspect the system or component for the presence of any of the following items:

- 1) Weld breaks;
 - 2) Punctures;
 - 3) Scrapes of protective coatings;
 - 4) Cracks;
 - 5) Corrosion; and
 - 6) Other structural damage or inadequate construction or installation. All discrepancies must be remedied before the tank system is covered, enclosed, or placed in use.
26. 725.293(a)(1), pursuant to 35 Ill. Adm. Code 725.293(a), in order to prevent the release of hazardous waste or hazardous constituents to the environment, secondary containment that meets the requirements of this Section must be provided (except as provided in subsections (f) and (g) of this Section).
- 1) For a new tank system or component, prior to its being put into service;
27. 725.295(a), pursuant to 35 Ill. Adm. Code 725.295(a), the owner or operator must inspect the following, where present, at least once each operating day:
- 1) Overfill/spill control equipment (e.g., waste-feed cutoff systems, bypass systems, and drainage systems) to ensure that it is in good working order;
 - 2) The aboveground portion of the tank system, if any, to detect corrosion or releases of waste;
 - 3) Data gathered from monitoring equipment (e.g., pressure and temperature gauges, monitoring wells, etc.) to ensure that the tank system is being operated according to its design; and
 - 4) The construction materials and the area immediately surrounding the externally accessible portion of the tank system including secondary containment structures (e.g., dikes) to detect erosion or signs of releases of hazardous waste (e.g., wet spots, dead vegetation, etc.).

BOARD NOTE: Section 725.115(c) requires the owner or operator to remedy any deterioration or malfunction the owner or operator finds. Section 725.296

requires the owner or operator to notify the Agency within 24 hours of confirming a release. Also, federal 40 CFR 302 may require the owner or operator to notify the National Response Center of a release.

28. 722.111, a generator of a solid waste must determine if that waste is a hazardous waste, using the methods specified.

29. 808.121(a), each person who generates waste shall determine whether the waste is a special waste, using the methods specified.

Other comments:

1. Also attached are copies of correspondence from Bob Rogers of Bodine Environmental Services to Mr. Darran regarding a proposal for the removal of wastes from his facility. These documents were obtained by Mr. Jansen from Mr. Rogers via e-mail. Mr. Darran never hired Bodine to characterize and remove the wastes. Mr. Darran informed Mr. Jansen prior to the Illinois EPA sampling that he could not afford the removal of the wastes, and that he had suffered a stroke and had other health problems subsequent to his contact with Bodine.

cc: DLPC/FOS – Springfield Region

ec: DRM/ Bruce Everetts